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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,369	08/31/2001	Soemin Tjong	MS1-921US	2116

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EXAMINER	
JOO, JOSHUA	
ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 10/04/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/945,369	TJONG ET AL.	
	Examiner	Art Unit	
	Joshua Joo	2154	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14 and 32-44* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14 and 32-44* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment Filed 8/2/2005

1. Claims 1-14, 32-44 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-14, 32-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Applicant's Admitted Prior Art (AAPA), Specification, Pages #1-9, in view of Narisi et al, #6,233,619 (Narisi hereinafter).

4. As per claim 1, AAPA teaches of:

a) a remote data communication interface driver of the host device implemented in the client device, the remote data communication interface driver configured to communicatively link with a data communication interface of the host device via the point-to-point data communication link (Page 6, lines 14-15. Computing device includes a Remote NDIS miniport driver layer. Page 1, lines 8-10; Page 7, lines 13-15. Remote NDIS miniport driver communicates with remotely connected device. Computing devices can be communicatively linked with a point-to-point communication connection.).

5. AAPA does not teach of:

a virtual driver component configured to communicate with the remote data communication interface device and the client device; and

a virtual network configured to communicatively link the remote data communication interface driver with the virtual driver component in the client device.

6. Narisi teaches of a transport layer interface for high-speed communication between two computer systems where an NT server comprises of a virtual LAN miniport driver used to provide communications between the NT server and the A Series server (Col 16, lines 29-35). The virtual LAN driver appears as a "Virtual Lan" to provide a link between NDIS interface and the NT server (Fig 8; Col 16, lines 29-36; 43-60). The NT server communicates messages from a client to the A Series server (Col 14, lines 22-25).

7. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Narisi because the teachings of Narisi to use a virtual LAN miniport driver to communicate between two network devices would improve the teachings of AAPA by providing a high speed communication interface, and the use of a virtual LAN would allow for two devices to use their native mechanism to communicate with each other.

8. As per claim 32, AAPA teaches of:

implementing a remote network communication component of a host computing device in a client computing device, the remote network communication component designed for data communication over a distributed network (Page 6, lines 14-15. Computing device includes a Remote NDIS miniport driver layer. Page 6, lines 6-8. Computing device has a distributed network data communication components.).

implementing a connection interface to couple the remote network communication component with the host computing device (Page 6, lines 16-21; Page 7, lines 13-15. Remote NDIS miniport driver communicates with remotely connected device through a bus/network microport.).

9. AAPA does not teach of:

implementing a virtual network to communicatively link the remote network communication component and a virtual driver component of the client computer device.

10. Narisi teaches of a transport layer interface for high-speed communication between two computer systems where an NT server comprises of a virtual LAN miniport driver used to provide communications between the NT server and the A Series server (Col 16, lines 29-35). The virtual LAN driver appears as a "Virtual Lan" to provide a link between NDIS interface and the NT server (Fig 8; Col 16, lines 29-36; 43-60). The NT server communicates messages from a client to the A Series server (Col 14, lines 22-25).

11. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Narisi because the teachings of Narisi to use a virtual LAN miniport driver to communicate between two network devices would improve the teachings of AAPA by providing a high speed communication interface, and the use of a virtual LAN would allow for two devices to use their native mechanism to communicate with each other.

12. As per claims 2, 33, and 34, AAPA teaches the data communication system, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver and the data communication interface is a Remote NDIS component configured to

communicate with the Remote NDIS driver via the point-to-point data communication link (Page 7, lines 12-15 ; Page 8, lines 1-2. The data communication interface driver is a Remote NDIS miniport driver, which communicates with the Remote NDIS driver of the remote device via a USB connection. Page 1, lines 8-10; Page 8, lines 1-2. Computing devices can be communicatively linked with a point-to-point communication connection. (It is inherent that the remote device's data communication interface is a Remote NDIS component because it is able to communicate NDIS messages with the Remote NDIS driver miniport driver.).

13. As per claims 3 and 35, AAPA teaches the data communication system as recited in claim 1, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver and the data communication interface is a Remote (NDIS) component configured to communicate Remote NDIS messages with the Remote NDIS driver via the point-to-point communication link (Page 7, lines 12-15; Page 8, lines 1-2. The data communication interface driver is a Remote NDIS miniport driver, which communicates Remote NDIS messages with the Remote NDIS driver of the remote device via a USB connection. Page 1, lines 8-10. Computing devices can be communicatively linked with a point-to-point communication connection (It is inherent that the remote device's data communication interface is a Remote NDIS component because it is able to communicate NDIS messages with the Remote NDIS driver miniport driver.).

14. As per claims 4 and 42, AAPA does not teach of the data communication system, wherein the virtual network is a local area network.

15. Narisi teaches of a virtual transport layer interface, where the virtual network is a LAN (Col 16, lines 29-36).

16. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Narisi because the teachings of Narisi's to use a virtual LAN would improve AAPA by allowing two devices to use their native mechanism to communicate with each other.

17. As per claim 5, AAPA teaches of the remote data communication interface driver that is a Remote Network Driver Interface Specification driver (Page 7, lines 12-15).

18. AAPA does not teach of a Remote Network Driver Interface Specification (NDIS) driver configured to communicate with the virtual driver component via the virtual network.

19. Narisi teaches of a data communication interface driver comprising a NDIS driver that communicates with a virtual driver in a virtual LAN to communicate between two servers (Col 16, lines 29-44).

20. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Narisi because the teachings of Narisi of a NDIS driver that communicates with a virtual driver in a virtual LAN would improve AAPA by providing a high speed communications interface. As taught by Narisi, the virtual LAN also would allow for two devices to use their native mechanism to communicate with each other.

21. As per claim 6, AAPA teaches the remote data communication system, wherein the remote data communication interface is a Remote Network Driver Interface Specification (NDIS) driver configured to communicate Remote NDIS messages (Page 7, lines 12-15).

22. AAPA does not teach that the Remote Network Driver Interface Specification (NDIS) driver communicates with the virtual driver component via the virtual network.

23. Narisi teaches of a data communication interface driver comprising a NDIS driver that communicates with a virtual driver in a virtual LAN in order to communicate between the two servers (Col 16, lines 29-44).

24. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Narisi because the teachings of Narisi of a NDIS driver that communicates with a virtual driver in a virtual LAN would improve AAPA by providing a high speed communications interface. As taught by Narisi, the virtual LAN also would allow for two devices to use their native mechanism to communicate with each other.

25. As per claims 7 and 43, AAPA teaches the remote data communication system, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver and the data communication interface is a Remote NDIS component configured to communicate with the Remote NDIS driver via the point-to-point data communication link. (Page 7, lines 12-15; Page 8, lines 1-2. The data communication interface driver is a Remote NDIS miniport driver, which communicates with the Remote NDIS driver of the remote device via a USB connection. Page 1, lines 8-10. Computing devices can be communicatively linked with a point-to-point communication connection (It is inherent that the remote device's data communication interface is a Remote NDIS component because it is able to communicate NDIS messages with the Remote NDIS driver miniport driver.).

26. AAPA does not teach that the Remote NDIS driver is configured to communicate with the virtual driver component via the virtual network.

27. Narisi teaches of a data communication interface driver comprising a NDIS driver that communicates with a virtual driver in a virtual LAN in order to communicate between the two servers (Col 16, lines 29-44).

28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Narisi because the teachings of Narisi of a NDIS driver that communicates with a virtual driver in a virtual LAN would improve AAPA by providing a high speed communications interface. As taught by Narisi, the virtual LAN also would allow for two devices to use their native mechanism to communicate with each other.

29. As per claims 8 and 44, AAPA teaches the data communication system, wherein the remote data communication interface driver is a Remote Network Driver Interface Specification (NDIS) driver and the data communication interface is a Remote NDIS component configured to communicate Remote NDIS messages with the Remote NDIS driver via the point-to-point data communication link (Page 1, lines 8-10; Page 7, lines 12-15; Page 8, lines 1-2. The data communication interface driver is a Remote NDIS miniport driver, which communicates Remote NDIS messages with the Remote NDIS driver of the remote device via a USB connection. Computing devices can be communicatively linked with a point-to-point communication connection (It is inherent that the remote device's data communication interface is a Remote NDIS component because it is able to communicate NDIS messages with the Remote NDIS driver miniport driver.).

30. AAPA does not teach that the Remote NDIS driver is configured to communicate with a virtual driver component via the virtual network.

31. Narisi teaches of a data communication interface driver comprising a NDIS driver that communicates with a virtual driver in a virtual LAN in order to communicate between the two servers (Col 16, lines 29-44).

32. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of AAPA and Narisi. The teachings of Narisi of a NDIS driver that communicates with a virtual driver in a virtual LAN would improve AAPA by providing a high speed communications interface. As taught by Narisi, the virtual LAN also would allow for two devices to use their native mechanism to communicate with each other.

33. As per claims 9 and 36, AAPA teaches the data communication system, further comprising a connection interface configured to couple the point-to-point data communication link with the client device (Page 1, lines 8-10; Page 7, lines 15-19. Devices can be linked with a point-to-point communication connection. Remote NDIS miniport driver communicates with a microport driver layer where the microport driver can include a USB bus microport, a 1394 bus microport, and a Bluetooth microport.).

34. As per claims 10 and 37, AAPA teaches the data communication system, further comprising a Universal Serial Bus data communication interface configured to couple the point-to-point data communication link with the client device (Page 7, lines 15-19. Remote NDIS miniport driver communicates with a microport driver layer, which can include a USB bus microport.).

35. As per claims 11 and 38, AAPA teaches the data communication system, further comprising a 1394 bus data communication interface configured to couple the point-to-point

data communication link with the client device (Page 7, lines 15-19. Remote NDIS miniport driver communicates with a microport driver layer, which can include a 1394 bus microport.).

36. As per claims 12 and 39, AAPA teaches the data communication system, further comprising a wireless data communication interface configured to couple the point-to-point data communication link with the client device (Page 7, lines 15-19. Remote NDIS miniport driver communicates with a microport driver layer, which can include a Bluetooth microport.).

37. As per claims 13 and 40, AAPA teaches the data communication system, further comprising a Bluetooth data communication interface configured to couple the point-to-point data communication link with the client device (Page 7, lines 15-19. Remote NDIS miniport driver communicates with a microport driver layer, which can include a Bluetooth microport.).

38. As per claims 14 and 41, AAPA teaches a data communication system comprising a data communication interface that can be a USB bus microport, 1394 bus microport, 1394 bus microport, or any other similar communication protocol microport (Page 7, lines 15-19).

39. AAPA does not specifically teach the data communication system, further comprising an infrared data communication interface configured to couple the point-to-point data communication link with the client device.

40. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an infrared data communication interface because an infrared data communication interface would improve the capability of the computing device of Applicant's Background by

providing different modes of wireless communication to remote devices such as laptops, notebooks, and printers, such as through line-of-sight, diffuse, or scatter mode.

Response to Arguments

41. Applicant's arguments filed 8/2/2005 have been fully considered but they are not persuasive.

Applicant argued that (1) Narisi and/or the Background do not teach or suggest "a remote data communication interface driver of the host device implemented in the client device", as recited in claims 1 and 32; and (2) Narisi and/or the Background do not teach or suggest "the remote data communication interface driver configured to communicatively link a data communication interface of the host device via the point-to-point data communication link" as recited in claim 1.

Examiner traverses the arguments:

42. As to point (1), the following quoted sections are from Applicant's Specification:

i) Page 14, lines 8-10, "Implementing the host computing device's Remote NDIS miniport driver layer 530 in an external device (i.e., the client device 504), instead of in the host computing device 502, facilitates a point-to-point communication link between two devices without having to configure the host computing device with interface components to communicate with the external device..."

ii) Page 16, lines 6-8, "Data communication system 600 implements the host computing device's Remote NDIS miniport driver layer 626 in an external device, or devices..."

43. According to sections (i) and (ii), the remote data communication interface driver is the Remote NDIS miniport driver of the host computing that resides in the client device, where by

the Remote NDIS miniport driver, being located in the client device, provides communication without having to configure the host computing device.

44. The following quoted sections are from Applicant's Background:

iii) Page 6, lines 14-15, "Computing device 402 also includes an NDIS layer 412 and a Remote NDIS miniport driver layer 414."

iv) Page 7, lines 12-15, "The Remote NDIS miniport driver layer 114 encapsulates NDIS object identifiers (OID) and NDIS data packets into data structures known as Remote NDIS messages that can be communicated without modification to a remotely connect device 408."

45. The examiner interprets the computing device of Applicant's Background as the client device, and the remote device of Applicant's Background as the host device.

46. According to section (i) of Applicant's Specification, implementing the Remote NDIS miniport driver layer of the host device in the client provides communication without modification to the host device. According to section (iv) of Applicant's Background, the Remote NDIS miniport driver layer of the computing device also provides communication without modification of the remote device.

47. Since the advantage of implementing a host's Remote NDIS miniport driver layer in a client device is to allow communication without modification to the host device, the Remote NDIS miniport driver residing in the computing device found in Applicant's Background may be considered as the interface driver of the remote device since the remote device communicates with the Remote NDIS miniport driver layer of the computing device without any modifications.

Therefore, the Remote communication interface driver in the computing device is considered as the Remote communication device of the remote device.

48. As to point (2), according to Applicant's Background, computing device, comprising of a Remote NDIS miniport driver layer, communicates with the remote device (Page 7, lines 12-14) via a USB connection (Page 7, lines 12-15; Page 8, lines 1-2).

49. The following quoted sections are from Applicant's Specification:

v) Page 13, lines 17-20, "Host computing device 502 includes a connection interface 534 that couples the point-to-point communication link 506 with a connection interface 536 at client device 504. The connection interfaces 534 and 536 can be implemented as hardware, software, or both to enable a physical USB or 1394 connection... or any other point-to-point communication protocol..."

50. According to section (v) of Applicant's Specification, devices communicating by a USB connection communicate by point-to-point communication protocol. Therefore, the computing and remote devices communicate by point-to-point protocol since the Remote NDIS miniport driver of the computing device communicates with the remote device via USB.

Conclusion

51. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

52. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

53. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7 to 4.

54. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John A. Follansbee can be reached on 571 272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

55. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 29, 2005
JJ

JOHN FOLLANSBEE
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